

PATENT

Atty Docket No.: 200209496-1
App. Ser. No.: 10/724,077

IN THE CLAIMS:

Please find below a listing of all of the pending claims. The statuses of the claims are set forth in parentheses.

1. (Currently amended) A cooling system for a display projector, said display projector having a housing formed of a plurality of panels around substantially enclosing a heat generating component, said cooling system comprising:

means for conducting heat from the heat generating component to at least one panel of the housing; and

means for dissipating the conducted heat, wherein the means for dissipating comprises the at least one panel of the display projector, and wherein the at least one panel comprises an exterior wall of the display projector.

2. (Currently amended) ~~The cooling system according to claim 1,~~ A cooling system for a display projector, said display projector having at least one panel around a heat generating component, said cooling system comprising:

means for conducting heat from the heat generating component to the at least one panel; and

means for dissipating the conducted heat, wherein the means for dissipating the conducted heat comprises the at least one [[a]] panel, and wherein the at least one panel contains containing a working fluid having a relatively low boiling point temperature.

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3. (Original) The cooling system according to claim 1, wherein the means for dissipating comprises a chamber housing a working fluid in the at least one panel, and wherein the working fluid is operable to vaporize and condensate to thereby dissipate the conducted heat.

4. (Original) The cooling system according to claim 1, further comprising:

means for supporting the heat generating component on at least one panel of the display projector, wherein the means for supporting the heat generating component comprises the means for conducting heat.

5. (Original) The cooling system according to claim 4, wherein the means for supporting the heat generating component comprises means for supporting the heat generating component on at least two panels of the display projector.

6. (Original) The cooling system according to claim 4, wherein the means for supporting comprises a panel containing a working fluid.

7. (Currently amended) The cooling system according to claim 1, wherein the means for dissipating the conducted heat comprises at least two panels of the display projector, said at least two panels comprising at least two exterior walls for the display projector.

8. (Original) The cooling system according to claim 1, further comprising:

fin means for increasing heat dissipated by the means for dissipating heat.

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9. (Original) The cooling system according to claim 1, wherein the means for conducting heat comprises one or more heat conducting members, said cooling system further comprising:

means for collecting heat conducted by the one or more heat conducting members, said means for collecting heat being configured to conduct heat to the means for dissipating heat.

10. (Original) The cooling system according to claim 9, wherein the heat generating device comprises a projecting device having a lamp reflector, and wherein the one or more heat conducting members are thermally connected to the lamp reflector.

11. (Original) The cooling system according to claim 9, wherein the heat generating device comprises a projecting device having a lamp reflector, said cooling system further comprising:

a cover device for thermal connection to the lamp reflector, said one or more heat conducting members being thermally connected to the cover device.

12. (Currently amended) ~~The cooling system according to claim 1,~~ A cooling system for a display projector, said display projector having a housing formed of a plurality of panels around a heat generating component, said cooling system comprising:

means for conducting heat from the heat generating component to at least one panel of the housing; and

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means for dissipating the conducted heat, wherein the means for dissipating
comprises the at least one panel of the display projector, and

wherein the heat generating device comprises a projecting device having a lamp reflector, said lamp reflector comprising the means for conducting heat.

13. (Original) The cooling system according to claim 12, wherein the lamp reflector includes a channel containing a working fluid having a relatively low boiling point temperature.

14. (Original) The cooling system according to claim 1, wherein the means for conducting heat comprises a thermosiphon containing a working fluid.

15. (Original) The cooling system according to claim 14, wherein the thermosiphon comprises an evaporator section thermally connected to the heat generating component and a condenser section thermally connected to the means for dissipating the conducted heat, and wherein the working fluid is operable to receive heat from the heat generating component in the evaporator section and convey the heat to the condenser section.

16. (Currently amended) The cooling system according to claim ~~[[14]]~~12, wherein the means for conducting heat comprises a thermosiphon containing a working fluid ~~wherein the heat generating component comprises a projecting device having a lamp reflector, said lamp reflector being integrally formed with the thermosiphon and functioning as an evaporator section of the thermosiphon.~~

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17. (Original) The cooling system according to claim 14, wherein the thermosiphon includes a wicking material for facilitating fluid travel through the thermosiphon.

18. (Currently amended) A display projector having a housing composed of a plurality of panels, said plurality of panels forming exterior walls of the display projector, said display projector comprising:

one or more heat generating components;

a heat dissipating device forming at least one of the plurality of panels; and

at least one heat conducting member for conducting heat from the one or more heat generating components to the heat dissipating device.

19. (Original) The display projector according to claim 18, wherein the heat dissipating device comprises a panel containing a working fluid having a relatively low boiling point temperature.

20. (Original) The display projector according to claim 18, wherein the heat dissipating device comprises a chamber housing a working fluid in the at least one panel, and wherein the working fluid is operable to vaporize and condensate to thereby dissipate the conducted heat.

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21. (Original) The display projector according to claim 18, further comprising:

at least one mounting plate for supporting the one or more heat generating components on the at least one panel, said at least one mounting plate being configured to conduct heat from the one or more heat generating components to the at least one panel.

22. (Original) The display projector according to claim 21, wherein the at least one mounting plate comprises a panel containing a working fluid having a low boiling point temperature.

23. (Original) The display projector according to claim 21, further comprising:

a thermally conductive interface material positioned between the at least one mounting plate in the at least one panel for enhancing thermal conduction between the at least one mounting plate and the at least one panel.

24. (Original) The display projector according to claim 18, wherein the at least one heat conducting member is thermally attached to the one or more heat generating components, wherein the at least one heat conducting member is also thermally attached to a collector, and wherein the collector is thermally attached to the heat dissipating device.

25. (Original) The display projector according to claim 24, wherein the at least one heat generating device comprises a projecting device having a lamp reflector, and wherein the at least one heat conducting member is thermally connected to the lamp reflector.

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26. (Original) The display projector according to claim 24, wherein the at least one heat generating device comprises a projecting device having a lamp reflector, said display projector further comprising:

a cover device for thermal connection to the lamp reflector, said one or more heat conducting members being thermally connected to the cover device.

27. (Original) The display projector according to claim 24, wherein the collector is removably attached to the heat dissipating device.

28. (Original) The display projector according to claim 18, wherein the at least one heat generating device comprises a projecting device having a lamp reflector, said lamp reflector comprising the at least one heat conducting member.

29. (Original) The display projector according to claim 28, wherein the lamp reflector includes a channel containing a working fluid having a relatively low boiling point temperature.

30. (Original) The display projector according to claim 18, wherein at least one heat conducting member comprises a thermosiphon.

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31. (Original) The display projector according to claim 30, wherein the thermosiphon comprises an evaporator section thermally attached to at least one of the one or more heat generating components, said thermosiphon further comprising a condenser section thermally attached to the heat dissipating device.

32. (Original) The display projector according to claim 31, wherein the condenser section is further removably attached to the heat dissipating device.

33. (Original) The display projector according to claim 30, wherein at least one of the one or more heat generating components comprises a projecting device having a lamp reflector, said lamp reflector being integrally formed with the thermosiphon and functioning as an evaporator section of the thermosiphon.

34. (Currently amended) A method for cooling one or more heat generating components in a display projector, said display projector having at least one panel forming an exterior wall of the display projector, said method comprising:

conducting heat from the one or more heat generating components to a heat dissipating device located in the at least one panel of the display projector; and

dissipating the conducted heat with the heat dissipating device to thereby cool the one or more heat generating components.

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35. (Original) The method according to claim 34, wherein the one or more heat generating components comprises a projecting device having a lamp reflector, and wherein said step of conducting heat further comprises conducting heat from the lamp reflector.

36. (Original) The method according to claim 35, wherein said step of conducting heat from the lamp reflector comprises conducting heat from the lamp reflector with a heat pipe having a working fluid.

37. (Original) The method according to claim 35, wherein said step of conducting heat from the lamp reflector comprises conducting heat from the lamp reflector to a cover device, conducting heat from the cover device to a heat conducting member, conducting heat from the heat conducting member to a collector, and conducting heat from the collector to the heat dissipating device.

38. (Original) The method according to claim 35, wherein the lamp reflector comprises a channel having a working fluid, and wherein the step of conducting heat comprises vaporizing the working fluid in the lamp reflector and directing the vaporized working fluid to the heat dissipating device.

39. (Original) The method according to claim 34, wherein the one or more heat generating components are mounted on the at least one panel with a mounting plate, said step of conducting heat further comprising conducting heat through the mounting plate.